

- Craig, Wallace.** 1911. The Expressions of Emotion in the Pigeons. II. The Mourning Dove (*Zenaidura macroura* Linn.) *The Auk*, Vol. XXVIII, 1911, pp. 398-407.
- Deane, Ruthven.** 1896. Passenger Pigeon. *The Auk*, Vol. XIII, pp. 234-237. (Reprinted in Mershon, pp. 200-204).
- Dunn, J. O.** 1895. The Passenger Pigeon in the Upper Mississippi Valley. *The Auk*, Vol. XII, p. 389.
- Gibbs, Morris.** 1894. Nesting Habits of the Passenger Pigeon. *The Oologist*, Vol. XI, 1894, pp. 237-240. (Reprinted in Mershon.)
- Mershon, W. B.** 1907. The Passenger Pigeon. New York. Pp. xii + 225. Contains reprints and also original matter by many authors, including Gibbs, Pokagon, Brewster, E. T. Martin, Blodgett, Whitman.
- Wilson, Alexander.** American Ornithology. Many editions. Art. "Migratory Pigeon."

OTHER EARLY RECORDS OF THE PASSENGER PIGEON.

BY ALBERT HAZEN WRIGHT.

(Concluded from page 366.)

Pennsylvania, New Jersey and Delaware.

In 1634, Capt. Thomas Yong, in his 'Voyage to Virginia and Delaware Bay and River,' found¹ "infinite number of wild pigeons" in the latter region. Some fifty years later (1683), 'A Letter from William Penn,' etc., in speaking "Of the fowl of the land," gives² "pigeons" as "in abundance." The same year, February 10, 1683, another letter from Pennsylvania by Thomas Paskel observes that³ "There are here very great quantities of birds and one hardly thinks it worth while to shoot at ring pigeons . . ." 'A Collection of Various Pieces concerning Pennsylvania,' printed in 1684, finds⁴ "The woods are supplied with a quantity of wild birds, as . . . pigeons, . . ."

¹ Mass. Hist. Soc. Coll., Fourth Series, IX, 1871, p. 130.

² Proud, Robert. The History of Pennsylvania, etc., Vol. I, 1797, p. 250.

³ Penn. Mag. of Hist. and Biog., Vol. VI, p. 326.

⁴ *Ibid.*, p. 313.

Two years later (September 13, 1686, Green Spring), 'A Letter from Doctor Moore Relating to the State and Improvement of the Province of Pennsylvania' yields this note of interest:¹ "We have had so great abundance of *Pigeons* this Summer, that we have fed all our Servants with them." About this same time, Pastorius found² "pigeons" in "great abundance" in Pennsylvania. Several years later (1702), Holm, in speaking of birds and fowls in New Sweden, notes³ both "turtle-doves" and "pigeons."

In verse we have two notes the first by Thomas Makin in 1729:⁴

"Here, in the fall, large flocks of pigeons fly,
So numerous, that they darken all the sky."

The other is undated and comes from John Holme.⁵

"The pigeons in such numbers we see fly
That like a cloud they do make dark the sky;
And in such multitudes are sometimes found,
As that they cover both trees and ground:
He that advances near with one good shot
May kill enough to fill both spit and pot."

In 1741 Oldmixon merely mentions⁶ pigeons as among the fowl of Pennsylvania. In 1765 we reach our first extended statement when Samuel Smith says:⁷ "The wild pigeons, at three or four seasons in the year, commonly pay a visit (except in seed time) generally acceptable: They have not been observed of late years so plenty as formerly; they then, sometimes, to avoid the north-east storms, flew night and day, and thick enough to darken the air, and break trees where they settled, and were more tame and more wanted; all which made them an article of consequence to the early inhabitants: The Indians, before the European settlements, used every year regularly to burn the woods, the better to kill deer; . . . this practice kept the woods clean, so that the pigeons readily got acorns, which then not being devoured by hogs, were

¹ Penn. Mag. of Hist. and Biog., Vol. IV, p. 449.

² Memoirs Hist. Soc. Penn., Vol. IV, 1840, 91. (Part II.)

³ Mem. Hist. Soc. Penn., Vol. III, p. 41. (Part I.)

⁴ Proud, Robert. The Hist. of Pennsylvania, etc., Vol. II, 1798, p. 367.

⁵ Bull. Hist. Soc. Penn., Vol. I, 1845-47, p. 165.

⁶ Oldmixon, John. *Vide supra*, Vol. I, p. 306.

⁷ Smith, Samuel. The History of the Colony of Nova-Caesaria or New Jersey. Burlington, N. J., 1765. 2nd edit., 1877, p. 511.

plenty almost everywhere, and induced a return more frequently than now: They breed chiefly to the northward."

Of this species in Pennsylvania, William Bartram, in 1791, writes as follows:¹ "These arrive in Pennsylvania in the autumn, from the North, where they continue during the winter, and return again the spring following, I suppose to breed and rear their young; and these kinds continue their journeys as far South as Carolina and Florida. In 1807 (July 31) at Presque Isle, Schultz records² the "pigeon." In 1819, C. B. Johnson reports that³ "Wild pigeons commonly visit this place in the spring and autumn; when their numbers are truly astonishing. Flocks of them are sometimes seen, so large as to contain millions; their flesh is dark, and, when fat, very good." Lastly, at Allentown, Pa., about Sept. 10, 1832, Maximilian, Prince of Wied, says,⁴ "the wild pigeons passed by in large flocks.

Virginia and Maryland.

In Virginia and Maryland we naturally would expect several early records of the pigeon, for many of the earlier scribes gave most of their attention to the colonies about the Potomac.

The first record by William Strachey (1610?-1612?) is interesting partly from its quaintness:⁵ "A kind of wood-pidgeon we see in the winter time, and of them such numbers, as I should drawe from our homelings here (such who have seene, peradventure, scarce one more then in the markt) the credit of my relation concerning all the other in question, if I should expresse what extended flocks, and how manie thousands in one flock, I have seene in one daie, wondering (I must confesse) at their flight, when, like so many thiekned cloudes, they (having fed to the norward in the daye tyme) retourne againe more sowardly towards

¹ Bartram, William. *Travels through North and South Carolina, Georgia, East and West Florida, etc.* Philadelphia, 1791, Part II, p. 289.

² Schultz, Christian. *Travels, etc.*, 2 vols., N. Y., 1810, Vol. I, p. 47.

³ Johnson, C. B. *Letters from the British Settlements in Pennsylvania.* Philadelphia and London, 1819, p. 55.

⁴ *Early Western Travels*, Vol. XXIII, p. 127.

⁵ Strachey, Wm. *Historie of Travale into Virginia.* Hakluyt Soc., London, 1849, p. 126.

night to their roost; but there be manie hundred witnesses, who maie convince this my report, if herein it testifieth an untruth."

In 1612, Capt. John Smith writes:¹ "In winter there are plenty of Swans, . . . Pigeons." 'A Relation of Maryland,' 1635 practically repeats² the same observation. The next year (after Smith), 1613, Whittaker at Henrico writes to the same effect:³ "In winter our fields be full of Cranes, . . . Pigeons, . . ." Two years afterwards Ralph Hamor found⁴ "*wilde Pigeons* (in winter beyond number or imagination, my selfe have seene three or foure houres together flockes in the aire, so thicke that even they have shadowed the skie from us) . . ." In 1624, Thomas Hariot, in his Historical Narrative, mentions⁵ "Stockdoves," among the birds of the region. In 1650 Edward Williams (2nd edit. London, 1650) speaks very encouragingly of Virginia as follows:⁶ "That no part of this happy Country may be ungratefull to the Industrious, The ayre it selfe is often clouded with flights of Pigeons . . ." Some twenty years later, Lederer found in his "several marches from Virginia to the West of Carolina," etc.⁷, "great variety of excellent Fowl, as . . . Pigeons . . ."

Soon after we discover a note where we would least expect it. This writer, with Dudley of Massachusetts, conceives of the flights of pigeons as portents. In 'The Beginning, Progress, and Conclusion of Bacons Rebellion in Virginia, in the years 1675 and 1676,' he writes:⁸ "About the year 1675, appear'd three prodigies in that country, which from th' attending disasters, were look'd upon as ominous presages. The one was a large comet . . . Another was, fflights of pigeons in breadth nigh a quarter of the midhemisphere, and of their length was no visible end; whose weights brake down

¹ Smith, Capt. John, etc., Works of, 1608-1631. Edited by Edward Arber, 1884. p. 60.

² Narratives of Early Maryland. New York, 1910, p. 80.

³ Hakluytus Posthumus or Purchas His Pilgrimes. By Samuel Purchas. Glasgow, 1905-1907. Extra Series Hakluyt Soc., Vol. XIX, 1906, p. 155.

⁴ Hamor, Ralph. A True Discourse of the Present Estate of Virginia, etc., till the 18 of June 1614, etc. London, 1615. Richmond 1860, p. 21.

⁵ Sir Walter Raleigh and his Colony in America. Prince Soc. Pub., Vol. XV, 1884, p. 218.

⁶ Force, Peter. Tracts and Other Papers, etc. Vol. III, 1844, p. 12.

⁷ Lederer, John. The Discoveries of, etc. By Sir William Talbot. London, 1672, p. 25.

⁸ Force, Peter. *Ibid.*, Vol. I, p. 7.

the limbs of large trees whereon these rested at nights, of which the ffwowers shot abundance and eat 'em; this sight put the old planters under the more portentous apprehensions, because the like was seen (as they said) in the year 1640 when th' Indians committed the last massacre, but not after, untill that present year 1675."

Much later, Philip Bruce, in 'Social Life of Virginia in the Seventeenth Century' (Richmond, 1907, pp. 167, 213), writes as follows:—"The clouds of wild pigeons arriving at certain seasons in incredible numbers, were killed by the tens of thousands, and for many weeks furnished an additional dish for the planter's table.... The destruction of the turkey and partridge did not approach that of the wild pigeon, a bird which arrived in Virginia at the same season annually in the course of its migration. All contemporary observers declare that the number of these birds appearing at these times was far beyond the power of human calculation; that for hours they darkened the sky like a pall of thunder clouds; and that they broke down, by their weight, the limbs of the forest wherever an entire flock lighted in search of food. It can be well imagined that the return of this vast multitude of birds was eagerly anticipated each year by every Virginian who was fond of the sport of shooting and capturing them. So thickly did they crowd the woods in different places, and so tame had they become from fatigue and hunger, that they were struck down in great numbers with poles reaching up to their perches; nor was the work of destruction confined to the day; thousands were killed in the same manner at night, when the glare of torches served to confuse and bewilder their eye-sight."

In 1722, Robert Beverly does not notice¹ the pigeon beyond a mere mention on two places. Six years later we come to William Byrd whose 'History of the Dividing Line Betwixt Virginia and North Carolina, 1728' (Petersburg, Va., 1841, p. 57) teems with natural history notes of real merit. Of a flight of pigeons, October 19, 1728, he speaks thus: "The men's mouths watered at the sight of a prodigious flight of wild pigeons, which flew high over our heads to the southward. The flocks of these birds of passage are

¹ History of Virginia. London, 2nd edit., 1722, pp. 135, 275.

so amazingly great, sometimes, that they darken the sky; nor is it uncommon for them to light in such numbers in the larger limbs of mulberry trees and oaks as to break them down. In their travels they make vast havoc amongst the acorns and berries of all sorts, that they waste whole forests in a short time, and leave a famine behind them for most other creatures; and under some trees where they light, it is no strange thing to find the ground covered three inches thick with their dung. These wild pigeons commonly breed in the uninhabited parts of Canada, and as the cold approaches assemble their armies and bend their course southerly, shifting their quarters, like many of the winged kind, according to the season. But the most remarkable thing in their flight, as we are told, is that they never have been observed to return to the northern countries the same way they came from thence, but take quite another route, I suppose for their better subsistence. In these long flights they are very lean, and their flesh is far from being white or tender, though good enough upon the march, when hunger is the sauce, and makes it go down better than truffles and morels would do."

In 1739 (March 21), John Clayton of Gloucester Co., Va., in a letter writing of 'Virginia Game and Field Sports,' enumerates the best fowls, including¹ "wild Pidgeons in prodigious great flocks, . . ." Two years later Oldmixon says² "There's great Variety of wild Fowl, as . . . Pigeons; "In 1763, Col. James Gordon of Lancaster Co., Va., made these entries in his journal:³ "Jan. 18, 1763. Vast quantities of wild pigeons about; our people killed 60 or 70 of them. Jan. 20 Went out with . . . who killed many wild pigeons." In 'A Topographical Description of the County of Prince George in Virginia,' 1793, John Jones Spooner states:⁴ "The woods afford . . . pigeons, . . ." Thomas Jefferson in his 'Notes on the State of Virginia,' 1825 (written in 1781) gives (p. 99) the Pigeon as a Virginian bird noting only its common and scientific names. In Maryland, Ducatel, in speaking of South Mountain, valley of Middletown), says that⁵ "at certain seasons

¹ Virginia Magazine, Vol. VII, Oct. 1899, No. 2, p. 173.

² Oldmixon, *vide supra*, Vol. I, p. 445.

³ Williams and Mary Quarterly Hist. Mag., Vol. XII, July 1903, No. 1, p. 1.

⁴ Mass. Hist. Soc. Coll., Vol. III, 1794 (reprint, 1810), p. 86.

⁵ Trans. Maryland Acad. of Sci. and Lit., Vol. I, Baltimore, 1837, p. 40.

of the year the trees are literally covered with flocks of wild pigeons (*Columba migratoria*)." .

In 1842, J. S. Buckingham writes at considerable length about this bird. He quoted Wilson's, Catesby's and Hinton's accounts, the first two of which are well known biologic sources and are therefore omitted. The last we retain because not so widely quoted. At Virginia Springs, August, Buckingham found¹ "The wood-pigeon was also more numerous than we had before observed it; and we were told, that sometimes their numbers here exceeded all belief."

"Hinton's account of these birds is as striking and as accurate as either of the preceding. 'The most remarkable characteristic of these birds is their associating together, both in their migrations, and during the period of incubation, in such prodigious numbers, as almost to surpass belief, and certainly to have no parallel among any other of the feathered tribes on the face of the earth, with which naturalists are acquainted. Their roosting-places are always in the woods, and sometimes occupy a large extent of forest. When they have frequented one of these places for some time, the ground is covered several inches deep with their dung; all the tender grass and underwood destroyed; the surface is covered with large limbs of trees, broken down by the weight of the birds clustering one above another; and the trees themselves, for thousands of acres, killed as completely as if girdled with an axe. The marks of this desolation remain for many years on the spot; and numerous places can be pointed out, where, for several years afterwards, scarcely a single vegetable made its appearance. When these roosts are first discovered, the inhabitants from considerable distances visit them in the night with guns, clubs, long poles, pots of sulphur, and various of other engines of destruction; and in a few hours they fill many sacks, and load their horses with the birds. The breeding-places are of greater extent than the roosts. In the western countries they are generally in beech-woods, and often extend, nearly in a straight line across the country, a great way. Not far from Shelbyville, in the state of Kentucky — once included within the boundary of Virginia — a few years ago, there

¹ Buckingham, J. S. *The Slave States of America*, 2 vols., London and Paris, 1842, Vol. II, pp. 330-332.

was one of these breeding-places, which was several miles in breadth, and upwards of forty miles in length. In this tract, almost every tree was furnished with nests, wherever the branches could accommodate them. The pigeons made their first appearance there about the 10th of April, and left it altogether, with their young, before the 25th of May. As soon as the young were fully grown, and before they left the nests, numerous parties of the inhabitants, from all parts of the adjacent country, came with waggons, axes, beds, cooking utensils, many of them accompanied by the greater part of their families, and encamped for several days at this immense nursery.”

The Carolinas.

In the Carolinas we have a few brief notes and two extended accounts, the latter by Lawson and Wm. Bartram, who were certainly two of the best of the earlier observers.

In 1682 occur two notes by Ashe and Wilson. The first gives¹ the “Pigeons” as among the “Birds for Food, and pleasure of Game,” while the second says,¹ “Here are also in the woods, great plenty of . . . Turtle Doves, . . . Pigeons.”

In 1714, John Lawson’s famous ‘History of Carolina’ appeared. First, in his ‘Journal of a thousand Miles of Travel among the Indians from South to North Carolina,’ when near Sapona, he encountered a flight of pigeons about which he remarks as follows:² “In the mean time, we went to shoot pigeons which were so numerous in these parts that you might see many millions in a flock; they sometimes split off the limbs of stout oaks and other trees upon which they roost of nights. You may find several Indian towns of not above seventeen houses, that have more than one hundred gallons of pigeon’s oil or fat; they using it with pulse or bread as we do butter, and making the ground as white as a sheet with their dung. The Indians take a light and go among them in the night and bring away some thousands, killing them with long poles, as they roost in the trees. At this time of the year,

¹ Historical Collections of South Carolina. By B. R. Carroll. New York, 1836, Vol. II, pp. 73, 28.

² Lawson, John. The History of Carolina, etc. London, 1714. Reprinted Raleigh, 1860, pp. 78-79, 222, 231-233.

the flocks as they pass by, in great measure, obstruct the light of the day." He gives it also in his list of birds.

Closely following the above list comes a very interesting discussion of this form. "Our wild pigeons are like the wood queese or stock doves, only have a longer tail. They leave us in the summer. This sort of pigeon (as I said before) is the most like our stock doves or wood pigeons that we have in England; only these differ in their tails which are very long, much like a parrakeeto's. You must understand that these birds do not breed amongst us, (who are settled at and near the mouths of the rivers, as I have intimated to you before) but come down (especially in hard winters) amongst the inhabitants in great flocks, as they were seen to do in the year 1707, which was the hardest winter that ever was known since Carolina has been seated by the Christians.... Although the flocks are, in such extremities, very numerous; yet they are not to be mentioned in comparison with the great and infinite numbers of these fowl that are met withal about a hundred or a hundred and fifty miles to the westward of the places where we at present live; and where pigeons come down in quest of a small sort of acorns, which in those parts are plentifully found. They are the same we call turkey acorns, because the wild turkies feed very much thereon; and for the same reason those trees that bear them are called turkey oaks. I saw such prodigious flocks of these pigeons in January and February, 1701-2, (which were in the hilly country between the great nation of the Esaw Indians and the pleasant stream of Sapona, which is the west branch of Clarendon or the Cape Fair river) that they had broke down the limbs of a great many large trees all over those woods whereon they chanced to sit and roost, especially the great pines, which are a more brittle wood than our sorts of oak are. These pigeons, about sunrise, when we were preparing to march on our journey, would fly by us in such vast flocks that they would be near a quarter of an hour before they were all passed by; and as soon as that flock was gone another would come, and so successfully one after another for the great part of the morning. It is observable that wherever these fowl come in such numbers, as I saw them then, they clear all before them, scarce leaving one acorn upon the ground, which would, doubtless, be a great prejudice to the planters that should

seat there, because their swine would be thereby deprived of their mast. When I saw such flocks of the pigeons I now speak of, none of our company had any other of shot than that which is cast in moulds, and was so very large that we could not put above ten or a dozen of them into our largest pices; wherefore we made but an indifferent hand of shooting them; although we commonly killed a pigeon for every shot. They were very fat and as good pigeons as ever I eat. I enquired of the Indians that dwelled in those parts, where it was that those pigeons bred, and they pointed toward the vast ridge of mountains and said they bred there. Now, whether they make their nests in the holes in the rocks of those mountains or build in trees, I could not learn; but they seem to me to be a wood pigeon that build in trees, because of their frequent sitting thereon, and their roosting on trees always at night, under which their dung commonly lies half a foot thick, and kills everything that grows where it falls."

In 1761 and 1770 we have the following notes: the first, in 'A Description of South Carolina,' etc., gives ¹ "the sorts of wild fowl that frequent the inland parts of the Country," as " . . . Pidgeons, . . .;" the second, "A Short Description of the Province of South Carolina: Written in the year 1763 by G. Milligen. London, 1770," states that ¹ "In the woods and fields are plenty of wild turkeys . . ., doves, pigeons, . . ." Shortly after, Alex. Hewatt, in 'An Historical Account of . . . South Carolina and Georgia' (London, 1779, Vol. I, p. 85), records "wild turkeys, pigeons, . . ., and turtle doves, in great numbers . . ."

Near the close of the eighteenth century William Bartram visited this region and in his 'Travels through North and South Carolina, Georgia, East and West Florida,' (Philadelphia, 1791, Part IV, Chap. X, pp. 469, 470), gives the following account: "Left Savannah in the evening, in consequence of a pressing invitation from the honourable Jonathan Bryan, Esq. who was returning from the capital, to his villa, about eight miles up Savanna river; . . . At night, soon after our arrival, several of his servants came home with horse loads of wild pigeons (*Columba migratoria*) which it seems they had collected in a short space of time at a

¹ Hist. Coll. S. C. By B. R. Carroll. N. Y., 1836, Vol. 2, pp. 250, 482.

neighboring Bay swamp; they take them by torch light; they have particular roosting places, where they associate in incredible multitudes at evening, on low trees and bushes, in hommocks or higher knolls in the interior parts of vast swamps. Many people go out together on this kind of sport, when dark; some take with them little fascines of fat Pine splinters for torches; others sacks or bags; and other furnish themselves with poles or staves; thus accoutered and prepared, they approach their roosts, the sudden blaze of light confounds, blinds and affrights the birds, whereby multitudes drop off the limbs to the ground, and others are beaten off with their staves, which by the sudden consternation, are entirely helpless, and easily taken and put into the sacks. It is chiefly the sweet small acorns of the *Quercus phillos*, *Quercus aquatica*, *Quercus sempervirens*, *Quercus flammula*, and others, which induced these birds to migrate in the autumn to those Southern regions; where they spend their days agreeably, and feast luxuriously, during the rigour of the colds in the North, whither they return at the approach of summer to breed."

At the close of the century John Davis, in a 'Journey from Charleston to Coosahatchie,' remarks:¹ "Sometimes we fired in vollies at the flocks of doves that frequent the corn fields; . . ." Finally, in 1809, David Ramsay gives² "the pigeon" as one of the "birds of passage," in South Carolina.

The Gulf States.

In this region the pigeon record begins early. In Florida, as early as 1567, Rene Laudonniere and his associates "fortified and inhabited there two Summers and one whole Winter." Of this period they say:³ "In the meane while there came unto our fort a flocke of stocke-doves in so great number, and that for the space

¹ Davis, John. *Travels of Four Years and a Half in the United States of America during 1798, 1799, 1800, 1801, and 1802.* London, 1803. New York edition, 1909, by A. J. Morrison, p. 91.

² Ramsay, David. *The History of South Carolina, etc.* Charleston, 1809, Vol. II, p. 333, 334.

³ Hakluyt, Richard. *The Principal Navigations Voyages Traffiques and Discoveries of the English Nation.* Glasgow edit., 1903-1905. Hakluyt Society, Extra Series, Vol. IX, p. 53.

of seven weeks together, that every day wee killed with harquebush shot two hundred in the woods about our fort." In a description of Florida, 1587, this same captain enumerates¹ "Pigeons, Ringdoves, Turtles, . . ." At the close of the sixteenth century Daniel Coxe, in discussing the resources of the country, writes:² "I had almost forgotten to communicate two commodities, one for the health, the other for the defence of our bodies The latter is salt petre, which may probably be here procured cheap and plentifully, there being at certain seasons of the year most prodigious flights of pigeons, I have been assured by some who have seen them, above a league long, and half as broad. These come, many flocks successively, much the same course, roost upon trees in such number that they often break the boughs and leave prodigious heaps of dung behind them; from which, with good management and very little expense, great quantities of the best saltpetre may be extracted." In "Virginia richly valued, By the description of the mainland of Florida, her next neighbor", etc. (London, 1609),³ "Pigeons" find a place. About a century and a half later, 1753, a writer notes that⁴ "Along the coast of New Billoxi, one finds turtle doves. There is also in this country all kinds of birds of passage: there are in winter . . . wood pigeon . . ." Five years later, in 1758, 'The History of Louisiana,' by M. LePage Du Pratz, appeared in which the author recounts some of his experiences with this species.⁵ "The Wood-Pigeons are seen in such prodigious numbers, that I do not fear to exaggerate, when I affirm that they sometimes cloud the sun. One day on the banks of the Mississippi I met with a flock of them so large, that before they all passed, I had leisure to fire with the small piece four times at them. But the rapidity of their flight was so great, that though I do not fire ill, with my four shots I brought down but two. These birds come to Louisiana only in the winter, and remain in

¹ Hakluyt Society, Extra Series, Vol. VIII, p. 451.

² Coxe, Daniel. A Description of the English Province of Carolana, By the Spaniards called Florida, and by the French La Louisiane, etc., In Hist. Coll. Louisiana, By B. F. French. Part II, Philadelphia, 1850, p. 270.

³ Force, Peter. *Ibid.*, Vol. IV, 1846, p. 132.

⁴ Memoires Historiques sur la Louisiane. Paris, Tome Premier, 1753, p. 91.

⁵ Du Pratz, M. Le Page. The History of Louisiana. London edit., 1774, pp. 278-280, 283, 196.

Canada during the summer, where they devour the corn, as they eat acorns in Louisiana. The Canadians have used every art to hinder them from doing so much mischief, but without success. But if the inhabitants of those colonies were to go a fowling for those birds in the manner that I have done, they would insensibly destroy them. When they walk among the high forest trees, they ought to remark under what trees the largest quantity of dung is to be seen. Those trees being once discovered, the hunters ought to go out when it begins to grow dark, and carry with them a quantity of brimstone which they must set fire to in so many earthen plates placed at regular distances under the trees. In a very short time they will hear a shower of wood-pigeons falling to the ground, which, by the light of some dried canes, they may gather into sacks, as soon as the brimstone is extinguished. I shall here give an instance that proves not only the prodigious number of those birds, but also their singular instinct. In one of my journeys at land, when I happened to be upon the bank of the river, I heard a confused noise which seemed to come along the river from considerable distance below us. As the sound continued uniformly I embarked, as fast as I could, on board the *pettyaugre*, with four other men, and steered down the river, keeping in the middle, that I might go to any side that best suited me. But how great was my surprise when I approached the place from whence the noise came, and observed it to proceed from a thick short pillar on the bank of the river. When I drew still nearer to it, I perceived that it was formed by a legion of wood-pigeons, who kept continually up and down successively among the branches of an ever-green oak, in order to beat down the acorns with their wings. Every now and then some alighted to eat the acorns which they themselves or the others had beat down; for they all acted in common, and eat in common; no avarice nor private interest appearing among them, but each labouring as much for the rest as for himself." "The pigeons for their fine flavour and delicacy are preferred by Europeans to those of any other country."

Of the same region T. Jeffreys writes in 1760;¹ "The number of

¹ Jeffreys, T. *The Natural and Civil History of the French Dominions in North and South America.* 1760, Part I, p. 160.

wood-pigeons which swarm here in winter, and in *Canada*, where they remain till autumn is astonishing; in *Louisiana* they feed upon acorns, in *Canada* they do much mischief by devouring the grain. They may be taken by finding out their recesses, and fumigating them with brimstone in the night. By this means they fall from the branches in heaps, and torches should also be provided to frighten them, and afford light at the same time for collecting them."

In Georgia, in 1776, they observed that ¹ "when it is very cold weather in the northern parts of America, here are vast flights of wild pigeons, which are very easy to shoot." In upper Louisiana Stoddard (1812) finds that the ² "forests . . . , according to the best accounts, contain about a hundred and thirty species of birds. The most useful of them are several kinds of ducks . . . the pigeon, . . ." In Texas, Kennedy, writing in 1841, says ³ "the sportsman, . . . will also find on land good store of . . . pigeons . . . suited to the table."

Central States East of the Mississippi River.

In this wide region many interesting records occur of which the following are doubtless only a small portion. Daniel Coxe, in speaking of the country about Lake Erie, enumerates the ⁴ "pigeons" among his "wild animals of this country." In 1698 Hennepin, when on the River Ouisconsin, found that ⁵ "Six Charges of Powder was all that we had left, which oblig'd us to husband it as well as we could; wherefore we divided it into twenty to shoot only for the future at Turtles or Wild Pigeons."

In 1769, Bossu says: ⁶ "When one approaches the country of the Illinois, one sees, during the day, clouds of doves, a kind of

¹ The History of North America. London, 1776, p. 225.

² Stoddard, Major Amos. Sketches Historical and Descriptive of Louisiana. Phila., 1812, p. 231.

³ Kennedy, Wm. Texas: etc. 2nd edit., London, 1841, Vol. I, p. 130.

⁴ Coxe, Daniel. *Vide supra*, p. 261.

⁵ Hennepin, L. A New Discovery of a Vast Country in America, etc. London, 1698, p. 193.

⁶ Bossu, M. Nouveaux Voyages aux Indes Occidentales. Premiere Partie, Amsterdam, 1769, pp. 96, 97.

wood or wild pigeons. One thing which may perhaps appear incredible, is that the sun is obscured by them; these birds living on nothing but beechnuts and acorns of the forests, are excellent in autumn; one sometimes kills as many as 80 of them at one shot." In 1772, 1773, Rev. David Jones, records in the Ohio valley ¹ "not many pigeons." In Ohio the Rev. M. Cutler found pigeons as he had in Massachusetts (p. 98). When not far from Marietta on September 10 and 11, 1788, he entered in his journal the following: ² "Saw some pigeons, but killed none." "Went on shore after pigeons alone, . . . Killed one pigeon, . . ." In his trip to Miami, in 1785, General Butler on December 8, at Hebron, notes ³ "pigeons very plenty flying over." In 1792 John Heckewelder made a journey to the Wabash and on his trip along the Ohio observed that ⁴ "Sunday, December 2d the flight of wild pigeons was indescribable, the low-lands were entirely covered with them. The inhabitants, with few exceptions forgot it was Sunday and went out to shoot pigeons."

In 1805 (September 2), when near Cassville, Wisc., Pike ⁵ "landed to shoot pigeons." April 16, 1806, at Brownsville, he also mentions that he "Shot at some pigeons at our camp." Several years elapse before Hulme's 'Tour in the Western Countries of America, Sept. 30, 1818-Aug. 8, 1819.' appeared. On June 23, 1819, we have this entry: ⁶ "See . . . thousands of pigeons. Came to Pigeon Creek, about 230 miles below the Falls, and stopped for the night at Evansville." At French Lick, July 5, 1819, he records: "Some of the trees near the Judge's [his host] exhibit a curious spectacle; a large piece of wood appears totally dead, all the leaves brown and the branches broken, from being roosted upon lately by an enormous multitude of pigeons. A novel sight for us unaccustomed to the abundance of the backwoods!" There

¹ Jones, Horatio G. *Journal of Rev. David Jones.* In *Cincinnati Miscellany.* By Chas. Cist. Vol. II, p. 232.

² Cutler, W. P. and Julia P. *Life, Journals and Correspondence of Rev. Manasseh Cutler.* Cincinnati, 1888, Vol. I, pp. 98, 422.

³ *The Olden Time*, Vol. II, 1847, p. 495.

⁴ *Penn. Mag. Hist. and Biog.*, Vol. XII, 1888, p. 182.

⁵ Pike, Zebulon Montgomery, *The Expeditions of, During the Years 1805-6-7.* New edit. by Elliott Coues. 3 vols. N. Y., 1895. Vol. I, pp. 32, 206.

⁶ *Early Western Travels, 1748-1846.* Edited by R. G. Thwaites. Cleveland, O., 1904, Vol. X, pp. 45, 63.

appeared, this same year, the Edinburgh edition of Warden's three volume account of the United States. In it, he records ¹ the pigeon as numerous in the Ohio valley, New Hampshire, New York, New Jersey, Pennsylvania, Tennessee, South Carolina, Louisiana, Mississippi, Michigan, Missouri, and Florida.

In 1819 Faux (*Memorable Days in America*, etc. London, 1823) also encountered the pigeon at Zainsville, Ohio, and in Tennessee. At the former place, October 14, he ² "Wandered in the fields shooting pigeons, which is here fine sport; they fly and alight around you on every tree, in immense flocks, and loving to be shot. They are rather smaller than English pigeons, and have a lilac breast; but in other respects are blue, or blue grey. They breed in the woods, and seem to court death by the gun, the sound of which appears to call them together, instead of scaring them away; a fowling-piece well charged with dust shot might bring down a bushel of these willing game at your feet." In the latter instance he describes in detail a pigeon roost, which "is a singular sight in thinly settled states, particularly in Tennessee in the fall of the year, when the roost extends over either a portion of woodland or barrens, from four to six miles in circumference. The screaming noise they make when thus roosting is heard at a distance of six miles; and when the beech-nuts are ripe, they fly 200 miles to dinner, in immense flocks, hiding the sun and darkening the air like a thick passing cloud. They thus travel 400 miles daily. They roost on the high forest trees, which they cover in the same manner as bees in swarms cover a bush, being piled one on the other, from the lowest to the topmost boughs, which so laden, are seen continually bending and falling with their crushing weight, and presenting a scene of confusion and destruction, too strange to describe, and too dangerous to be approached by either man or beast. While the living birds are gone to their distant dinner, it is common for man and animals to gather up or devour the dead, then found in cartloads. When the roost is among the saplings, on which the pigeons alight without breaking them down, only

¹ Warden, D. B. *A Statistical, Political, and Historical Account of the United States of North America*, etc. Edinburgh, 3 vols., 1819. Vol. I, pp. 382, 496; Vol. II, pp. 38, 351, 411, 528; Vol. III, pp. 10, 55, 76, 139, 140, 223.

² *Early Western Travels*, Vol. XI, pp. 174, 175, 236, 237.

bending them to the ground, the self-slaughter is not so great; and at night, men, with lanterns and poles, approach and beat them to death without much personal danger. But the grand mode of taking them is by setting fire to the high dead grass, leaves, and shrubs underneath, in a wide blazing circle, fired at different parts, at the same time, so as soon to meet. Then down rush the pigeons in immense numbers, and indescribable confusion, to be roasted alive, and gathered up dead next day from heaps two feet deep." In Michigan, 1819, Dana found that¹ "pigeons . . . in autumn appear in swarms, and prey upon corn and new sown wheat."

On September 27, 1820, James Flint in his 'Letters from America,' etc. (Edinburgh, 1822), finds that on the east side of the little Miami River² "The woods abound in pigeons, a small species of fowls which migrates to the southward in winter, and return to the north in spring. Their numbers are so immense that they sometimes move in clouds, upwards of a mile in length. At the time when they are passing, the people have good sport in shooting them, as one flock frequently succeeds another before the gun can be reloaded. The parts of the woods where they roost, are distinguished by the trees having their branches broken off, and many of them deadened by the pressure of the myriads that alight upon them."

In 'Travels from Detroit Northwest', etc., Schoolcraft when at Sandy Lake July 13, 1820 says:³ "The . . . pigeon and turtle dove, occasionally appeared in the forest, to enliven this part of the journey." At Prairie du Chien, "The pigeon, . . . are also common along this part of the Mississippi." In a much later work this same author uses the pigeon to illustrate the hurry and bustle of a busy town.⁴ "Whoever has seen a flock of hungry pigeons, in the spring, alight on the leaf-covered ground, beneath a forest, and

¹ Dana, E. *Geographical Sketches on the Western Country*, etc. Cincinnati, 1819, p. 262.

² *Early Western Travels*, Vol. IX, p. 301.

³ Schoolcraft, H. R. *Narrative Journal of Travels from Detroit Northwest*, etc., in the year 1820. Albany, 1821, pp. 216, 356.

⁴ Schoolcraft, H. R. *Personal Memoirs of a Residence of Thirty Years with the Indian Tribes on the American Frontiers*, etc., 1812-1842. Phila., 1851, pp. 95, 367.

apply the busy powers of claw and beak to obtain a share of the hidden acorns that may be scratched up from beneath”

In 1822, John Woods (*Two Years Residence . . . in the Illinois Country, etc.*, London, 1822) writes that ¹ “The birds [of the country] are . . . , pigeons, doves, Pigeons are sometimes in immense flocks, smaller than the wild pigeons, but larger than the tame ones of England. A great number of doves, much like turtle doves.” “In my two journeys I saw a great number of wild-ducks and pigeons on the banks of the Wabash; although a bad shot, I think if I had had a gun, I could have killed a great many.” His third and last note is September 1, 1820: “We have had large flocks of pigeons, from the north, almost continually passing over us for the last week.”

On the Fox River, just before September 1, 1827, Thomas L. M’Kenney found ² “pigeons . . . numerous.” In the same year W. Bullock (*Sketch of a Journey through the Western States of America, etc.*, London), when at Cincinnati, Ohio, says, ³ “the farmyard abounds with *wild* pigeons, as tame as our domestic ones.” The following year (1828) Timothy Flint records in Indiana that ⁴ “in some seasons, wild pigeons are seen here in countless numbers. Where they roost, the limbs of the trees are broken off in all directions by their numbers.”

Of the period 1830–1840 one pioneer in Michigan says: ⁵ “Of the pigeons [they came] by the million,” and recalls “their digging acorns out of the deep snow.” In 1835 there appeared ‘*Sketches and Eccentricities of Colonel David Crockett*’ in which a long description of a pigeon roost appeared (pp. 193, 194.) “The habits of the wild pigeon have long been a subject of much curiosity. The great numbers in which they appear, and the singular propensity that they have to roost together, have for some time been a source of speculation. They frequently fly as much as eighty miles to feed, and return to their roost the same evening.

¹ *Early Western Travels*, Vol. X, pp. 291, 315, 345.

² M’Kenney, Thomas L. *Memoirs, Official and Personal, etc.* 2 vols., New York, 1846. Vol. I, p. 104.

³ *Early Western Travels*, Vol. XIX, p. 140.

⁴ Flint, Timothy. *A Condensed Geography and History of the Western States on the Mississippi Valley*. Cincinnati, 1828. Vol. II, p. 163.

⁵ *Michigan Pioneer and Hist. Colls.*, Vol. XIV, p. 512.

This was proved by shooting them at their roost of a morning when their craws were empty, and then shooting them again in the evening when they returned. Their craws were then found filled with rice, and it was computed that the nearest rice-field could not be within a less distance than eighty miles. I have often seen pigeons roosts in the older states, but they scarcely give an idea of one in the west. I have seen a cloud of those birds cover the horizon in every direction, and consume an hour in passing. And near a roost, from an hour before sunset until nine or ten o'clock at night, there is one continued roar, resembling that of a distant waterfall. A roost frequently comprises one hundred acres of land; and strange, though literally true, as can be attested by thousands, the timber, even though it be of the largest growth, is so split and broken by the immense numbers which roost upon it, as to be rendered entirely useless. There are few persons hardy enough to venture in a roost at night. The constant breaking of the trees renders it extremely dangerous; and besides there is no necessity for shooting the birds, as the mere breaking of the limbs kills many more than are taken away. A pigeon roost in the west resembles very much a section of country over which has passed a violent hurricane. Wolves, foxes, *etc.*, are constant attendants upon a pigeon roost."

In Ohio, Caleb Atwater says:¹ "The wild pigeon comes in the spring, sometimes in March, or even earlier, on his journey north, and after paying us a visit, of about a month, passes on his journey. In September he returns to see us again, spending six weeks with us, feasting on the pigeon berry, *phytolacca decandra*, the new acorns, and other nuts, and such food as the country produces for his use. Formerly the pigeons tarried here all summer, building their nests, and rearing their young; but the country is too well settled for them now; so, like the trapper for beaver, and the hunter, they are off into the distant forests, where their food is abundant, and where there is none to disturb them in their lawful pursuits."

Upon Lake Michigan Jas. H. Lanman records:² "During

¹ Atwater, Caleb. A History of the State of Ohio. 2nd edit., Cincinnati, 1838, pp. 93, 94.

² Lanman, Jas. H. History of Michigan, *etc.*, New York, 1839, p. 278.

certain periods, violent thunder storms rage . . . ; and the shore has been known to be covered with the skeletons of pigeons and gulls, which had been drowned in crossing at such times. Eagles, in great numbers, also frequent these shores, in order to glut themselves upon their dead bodies, which are thrown upon the beach."

In Indiana, at New Harmony, Maximilian, Prince of Wied, finds¹ "pigeons, . . . were seen in the orchards during the whole winter." In the same State at a somewhat later date (1849), the 'Indiana Gazetteer,' (3rd edit., Indianapolis, p. 15) records: "A place called the Pigeon Roost, in Scott county, was formerly so much resorted to by Pigeons, that for miles nearly all the small branches of a thick forest were broken off by their alighting in such numbers on them, and the ground was covered with their ordure several inches in depth for years afterwards. In the south-east corner of Marion county there was a similar Pigeon Roost, and several others in the State have been mentioned."

Finally, Ferris's note of Michigan says:² "The wild pigeons, in countless numbers, will hover, and flutter, and flap among the bur-oaks."

West of the Mississippi Valley.

In this wide expanse of territory the pigeon is not so common as eastward of the Mississippi. The roll of records is not extended. It begins with the Lewis and Clark Expedition. When near 47° 3' 10" north latitude July 12, 1805, Patrick Gass says,³ "Here we saw some wild pigeons and turtle doves." A day later (July 13, 1805), at White Bear Islands (Missouri River), Lewis says:⁴ "I saw a number of turtledoves and some pigeons today, of the latter I shot one; they are the same common to the United States, or the wild pigeon as they are called." Near the same place one

¹ Early Western Travels, Vol. XXII, p. 195.

² Ferris, J. The States and Territories of the Great West. N. Y. and Auburn, 1856, p. 176.

³ Gass, Patrick. Journal of the Voyages . . . of Capt. Lewis and Capt. Clarke, etc. 4th edit., Phila., 1812, p. 107.

⁴ Lewis and Clark Expedition, 1804-1806, Original Journals of. Edited by R. G. Thwaites. 8 vols., New York, 1904-5. Vol. II, p. 227.

year later, July 12, 1806 he again¹ "saw . . . , pigeons, doves; etc. the yellow Currants beginning to ripen." On Aug. 26, 1805 Clark near Shoshone² saw "Some few Pigeons," as did he on July 21, 1806 (Missouri River), July 5, 1806, and Feb. 12, 1804 (near St. Louis, Mo.).³

In 1811, Brackenridge made a voyage up the Missouri River, and May 7, when near the mouth of the Platte,⁴ "killed some pigeons." In 1817, Maj. Stephen H. Long went in a "six-oared skiff to the Falls of Saint Anthony." In the course of his journey, near Lake Pepin, July 18, he⁵ "killed a few pigeons."

In 'A View of the Lead Mines of Missouri' (New York, 1819), Schoolcraft says (p. 37), "pigeons, . . . in some parts of the interior, are so numerous that the woods seem alive with them." In an 'Account of an Expedition from Pittsburgh to the Rocky Mountains, performed in the Years 1819 and '20,' etc., under . . . Maj. Stephen H. Long,"⁶ "*Columba migratoria* — Passenger pigeon (*C. Canadensis* is the female. Temm.)" occurs in the list of birds; at Engineer Cantonment (Council Bluffs), "*Columba migratoria* arrived May 2, 1820"; and lastly, August 28, "Several small flocks of the common wild-pigeons flew by us both yesterday and today, in a southerly direction." The same commander, in his expedition to the St. Peter's River, etc., in 1823, when on the above river says:⁷ "The party that travelled in the boats, saw abundance of pigeons, but with the exception of these, no other kind of game; . . . The land party, although provided with an excellent hunter, killed but a few pigeons; . . ."

In 1820, Stephen W. Kearny, in 'A Narrative Account of the Council Bluffs, St. Peter's Military Expedition,' etc., says that July 22, 1820, they⁸ "followed up, on the margin of the river,

¹ Lewis and Clark Expedition, Thwaites ed., Vol. V, p. 200.

² *Ibid.*, Vol. III, p. 44.

³ *Ibid.*, Vol. V, p. 279; Vol. VI, pp. 169, 221.

⁴ Brackenridge, H. M. Views of Louisiana, etc. Pittsburgh, 1814, p. 225.

⁵ Coll. Hist. Soc. Minnesota, Vol. II, p. 44.

⁶ James, Edwin. Account of An Expedition . . . under . . . Maj. Stephen H. Long, etc. 2 vols., Phila., 1823. Vol. I, p. 373, 377; Vol. II, p. 231.

⁷ Keating, William H. Narrative of An Expedition to the Source of St. Peter's River, Lake Winnepeek, Lake of the Woods, etc. Performed in the Year 1823, etc. under . . . Maj. Stephen H. Long, 2 vols. Phila., 1824, p. 292.

⁸ Kearny, Stephen Watts, The 1820 Journal of, edited by V. M. Porter, pp. 23, 42. Reprinted from Missouri Hist. Soc. Coll., Vol. III, 1908.

seeing . . . great many Pigeons, several of which we shot . . .” On August 5, at “Bear Creek,” they “Started at 4 A. M. passed ‘Bear Creek’ on the *West* and at breakfast time stopped at a small Island, where we saw a large flock of pigeons, and secured 8 of them for our dinner.” The year following, 1821, Schoolcraft, observed¹ “the beautiful passenger pigeon.” In Missouri, 1828, Flint says:² “Turtle doves are always numerous, as in some seasons are the wild pigeons.” In 1832 he observes that² “Pigeons sometimes are seen in great flocks. Their social and gregarious habits incline them to roost together, and their places of resort are called ‘pigeon roosts.’ In these places they settle on all the trees for a considerable distance round, in such numbers, as to break off the branches.” The same year Schoolcraft, in a ‘Narrative of an Expedition through the Upper Mississippi to Itasca Lake,’ etc., in 1832 (New York, 1834, pp. 54, 106), “saw . . . the common pigeon, which extends its migrations over the continent.”

The next year (July, 1833), at Big Muddy River, Maximilian, Prince of Wied, in his ‘Travels in the Interior of North America,’ says:³ “Messrs. Bedmer and Mitchell made an excursion into the wood, where they saw many wild pigeons, . . .” At old Fort Clarke they found the wild pigeon, also along Cannonball River, N. D. In 1834, John K. Townsend made ‘A Journey across the Rocky Mountains to the Columbia River,’ and says,⁴ “when beyond St. Charles, Mo., March 31, in the morning, we observed large flocks of wild pigeons passing over . . .” At Powder Creek, August 28, he says, “Game has been exceedingly scarce, with the exception of a few grouse, pigeons, . . .”

One year later, in November, 1855, Dr. Williamson, when among the Dahkotahs, wrote to the ‘Cincinnati Journal’ that⁵ “Exclusive of their corn, their feed consists . . . in the summer, [of] roots, fish, wild pigeons, and cranes.” In 1837, Alphonso Wetmore,

¹ Schoolcraft, H. R. *Travels in the Central Portions of the Mississippi Valley.* New York, 1825, p. 72.

² Flint, T. *A Condensed Geography and History of the Western States, etc.* Cincinnati, 1828, Vol. II, p. 73; also *The History and Geography of the Mississippi Valley, Cincinnati*, 1832, Vol. I, pp. 72, 200.

³ *Early Western Travels*, Vol. XXIII, pp. 32, 250; XXIV, p. 86.

⁴ *Early Western Travels*, Vol. XXI, pp. 126, 269.

⁵ Neill, Edward Duffield. *The History of Minnesota, etc.*, Philadelphia, 1858, p. 445.

states:¹ "The game of Missouri, the ranks of which are thinned as settlements advance, consists of . . . wild pigeons . . ."

In 1848, James Hall, who has written so much of the West says:² "I have never seen any of those *pigeonroosts*, which have excited so much curiosity, and where these birds are said to alight in such quantities as to break down the limbs of the trees." Lastly, in 1851, J. W. Bond, in 'Camp Fire Sketches' writes:³ "Today [August 24, 1851], our French-Canadians and half breeds, who had charge of the provision and baggage-carts, have been shooting pigeons . . ."

A COMPARATIVE STUDY AT COBB'S ISLAND, VA.

BY ALFRED B. HOWELL.

ON June 22, 1909, I arrived at Cobb's Island, Virginia, equipped for a week's stay, having made the trip solely for the purpose of ascertaining the conditions then prevailing among the water birds breeding there, in order to compare them with the facts gathered by Mr. T. Gilbert Pearson in 1892 (*Oologist*, Vol. IX, No. 8) and Mr. Frank M. Chapman in 1902 (*Camps and Cruises of an Ornithologist*) in the same locality. I chose this island in preference to others because it was the most accessible of any of the large breeding grounds, and because it is uniformly well known.

There is frequently a change from year to year in the prevalent conditions among a colony of birds, until at the end of a decade, it has often become very pronounced. Sometimes these changes can be ascribed to known causes, and again the reasons are veiled in mystery even to the most observant.

In the good old days Royal and Least Terns bred upon the

¹ Wetmore, Alphonso. *Gazetteer of the State of Missouri*. St. Louis, 1837, p. 29.

² Hall, James. *The West: Its Soil, Surface, and Productions*. Cincinnati, 1848, p. 124.

³ Bond, J. W. *Minnesota and its Resources*, New York, 1853, p. 257.